HAMATEUR CHATTER

The Milwaukee Radio Amateurs Club

November 2010, Volume 18, Issue 11

One of the World's Oldest Continuously Active Radio Amateur Clubs—since 1917

Presidents Letter

By the time you read this the local QCWA should be holding their weekly net on our repeater (8 PM Mondays). If you check into the Friday night club nets or are subscribed to the club Yahoo group, you would already know about this. I hope our repeater can provide them what they need.

I also understand a member questioned the handling of authorization of QCWA use of the repeater. I have been saying I want committees to handle the nitty-gritty dealing with club activities. We have a repeater technical committee. The committee has been in operation for a bit more than 10 years (there wasn't really a committee when the repeater was at Ed Wille's house).
Anything concerning the repeater operation should be handled by the committee. I, as license Trustee, have ultimate authority of anything on the air happening with the repeater (not I as President). Even above and beyond the board. Why? Per the FCC, I am legally responsible for any on the air activity using the call W9RH. The repeater uses the call W9RH. The board exists to oversee the operation and actions of committees and to control the club finances. The board does not need to spend time discussing each and every little detail of anything the club does. 2 hours at a time 10 times during the course of a year is not enough time to do that. Using email and maybe even radio (though some things should not really be discussed on the radio) the board will always be informed of any action of the club, and will always say yea or nea. If any person has any issue with that concept, I encourage them to talk to me. Me directly. Not any other member, certainly not any non-member. It's easy to sit back and criticize.
It is not so easy to actually perform.
As an additional note to the above paragraph. I'm sure everyone has worked for at least one manager who felt they were the most important person in the universe. They would and must be involved in any and all decisions involving their department. The technical term is micro-managing (not to mention the psychological terms for self-importance). I suspect that person was not particularly well-liked. I also suspect they rose to their destined position in the company per the Peter Principle. Well, while a number of people can think of a lot of terms to describe me, I don't think micro-manager or self-important appear on that list. If you don't like my management style, if you don't like committees being responsible for the details of club activities, then get up off your back side and run a committee or run for office. If you can not bring yourself to do that, then forever hold your peace (at least while I'm around). Back to club stuff.

Last month I said I would talk about the committees which have been operation. And I bet you didn't realize there were any. Committees which have been in operation and could always use some new blood, new help (in no particular order):

1. History and archives - for about 7 or 8 years it has been pretty much me (except for the storage of a large portion of the club archives). Before me it was Jim Tromblay (for probably about 8-10 years). Back in the 70's it was a dead guy (yes, he was dead for about 10 years before the club realized he was the archive custodian). If it seemed like the digital archives have been slow in progressing, it will be even slower now that I am playing President.

MRAC Officers:

Terms Expiring in 2010

- President – Dave, WB9BWP
- V-President-Vacant
- Secretary – Mike, KC9CMT
- Treasurer – Vacant
- Director – Mark, AB9CD
- Director – Dave,KA9WXN

Terms Expiring in 2011

- Director – Al, KC9IJJ
- Director – Hal ,KB9OZN
- Director – Vacant

The Club Phone Number is: (414) 332-MRAC or

(414) 332- 6 7 2 2

Visit our website at:

www.w9rh.org

Mail correspondence to:

M. R. A. C.

P.O. Box 240545

Milwaukee, WI 53223

Presidents Letter Continued:

2. Repeater - For about 10 years it has been Mark AB9CD, Dave Schank KA9WXN, and me, with Dave Karr KA9FUR as a special consultant (Matt Planning KB9PRC was also involved for a while). Good thing the machine pretty much works as all those 4 people (3 of whom are named Dave) are pretty busy with other things. There will be a need for additional control operators. Some changes are taking place in the control of the repeater and those changes could delay any new volunteers getting set-up. Generally the identity of those people is kept quiet, so that is sort of an unsung job. The control operators basically just keep an ear on the repeater and have basic on/off control (actual programming and RF-type stuff is limited to the technical committee).

3. FM Simplex Contest - Joe N9UX and Jeff K9VS with help from Mark AB9CD and even a little help from a non-member, Sherm KB9Q. It's nice to come up with something new every year. Any ideas?

There are also some tasks which are not really handled by a committee but could / should be. How about:

1. Refreshments at meetings - Mike KC9CMT has been doing this for a while now (and making up the difference between costs and what people pay in). By the way, he is also the Secretary, Chatter editor, the person with the key to open up the Church, and on the Hamfest committee. Any other jobs, you the membership wants to give to him so we can totally burn him out?

2. Raffle - Tom N9UFJ and Jacquie have been doing that since at least the mid 90's. Don't you think they need a little help? Besides Tom will not be at the November meeting, therefore no raffle. See how that works.

Both of the above could fall into a meeting logistics committee along with keeping the PA system, video projector, screen, and anything else necessary for the successful running of a meeting.

And of course the ultimate committee, the board of directors. While we may have a VP coming (more on that in the future), we still need a Treasurer and an additional director (the director is until June).

At the October meeting we had the beginning of a discussion of proposed by-laws changes the board has been working on (with no input from anyone else as usual). We will formally present it to the membership at the November meeting and January will be a "special" meeting (per the current bylaws) where we will vote on the changes. I will have an article discussing the proposals in the January Chatter. If you really care, speak up by sending email to me directly or the club (w9rh@arrl.net). Meeting time is precious (unless you want to spend the night), so let's take care of as much as we can prior to the January meeting. The main point of the changes is to go back to what the club did for the first 34 years of it's existence and elect a collection of Directors who will choose the actual officers.

I don't know if it is a better system than what we have, but the current system seems broken and must change. If it wasn't broken, we would not have been operating at a less than complete board for a number of years now.

Finally, we have a load of very interesting programs coming your way over the next few months. You best enjoy it while you can.

November - Homebrew electric car

December 5 - Christmas Party

January - discussion by member request (member request?)

February - Fox Hunting by Paul WB9ODQ

March - Gordon West WB6NOA making his 3rd appearance at an MRAC meeting

April - Member show-and-tell

May - the annual AUCTION

June - TBA (the band)

Board of Director's Meeting Minutes

Meeting called to order at 6:56 PM.

Present: Mark, AB9CD, Dave DeFebo, WB9BWP, Michael, KC9CMT, Dave, KA9WXN, Hal, KB9OZN, AL, KC9IJJ.

Motion to accept Meeting Minutes as published in the HamChatter Made by Dave, WB9BWP, Seconded by Michael, KC9CMT, Accepted by a vote of 6-0

Preliminary Discussions:

No Treasurer's report presented. Club no longer has an active Treasurer.

November Membership Meeting will be on November 15th due to the Thanksgiving Holiday falling on the usual date.

Dues to be collected at membership meetings by the club Secretary starting in January of 2011, if no treasurer is appointed by then.

Mike Wittman of the Robotics group was sent a thank you letter & copy of the HamChatter.

Gordon West will make a presentation at the Club's March meeting. AES Superfest will start the next day. President wants to make some more recordings with Gordon for the Repeater.

Should Club put together a General Level License class for the spring of 2011.

Old Business:

Repeater Report:

No action to report in this area.

Board of Director's Minutes Continued:

Club Officers: Club still in need of Treasurer, Vice-President and a Director.

2011 SwapFest: Dates put forward of either March 19th or March 26th, 2011. Need Dave to finalize rental agreement with Employer.

Programs:

November: Electric Vehicles and Hybrid Cars.

December: No meeting scheduled.

January: Operating, FM Simplex Contest and talk on Schematic Reading.

February: Fox Hunting by WB9ODQ.

March: The Gordon West Show.

April: Club show & tell session, & Election Meeting.

May: Club Auction.

New Business:

Swapfests: AES Superfest will be April 1st & 2nd, 2011. Club will buy entry tickets for anyone manning the club table during all swapfests.

By-Laws Change: Club Board of Directors still in the process of writing by-law changes. Should be ready for a membership vote by January Meeting.

Xmas Party: Al, KC9IJJ, wrote up a sign-up sheet for the December 5th Party. Sheet is being sent out with the chatter.

Club Breakfast: There is a MAARS monthly breakfast that MRAC will start to announce on it's nets and endorse at meetings.

Chatter: Membership renewal forms will be attached to the December through February HamChatter.

Committees: Net Committee still needs to be established. Field day committee needs to be put together by the end of 2010 for club to have a Field day in 2011 at Pioneer village. Equipment stored at Pioneer Village basement may need to be moved.

Miscellaneous: Ham in Elm Grove called club to have tower taken down. Club roster should be printed each year instead of every two years.

Motion to adjourn at 8:55 PM . Motion made by Al, KC9IJJ, Second by Hal KB9OZN. Passed without dissent by a vote of 6-0.

Room returned to condition as found upon arrival.

Respectfully submitted,
Michael, KC9CMT

Membership Meeting Minutes with Presentation summary:

Membership meeting called to order by Dave, WB9BWP at 7:04 pm.

Program for October: Solar Power by presenter Amy Heart of the Midwest Renewable Energy Association (MREA). MREA is a non-profit, education based association founded in 1990. It as a group sponsors a number of shows such as the Energy fair, conferences, hands on training and consumer education. There is a solar map on the internet for Milwaukee.

Solar arrays; Solar arrays consist of solar modules. A morphs solar arrays consist of flexible sheets that can be installed as shingles would be on houses. The State will give tax incentives for solar arrays certified by the state.
Sun tracking solar arrays are the most expensive type of instillation.
Three types of home & business systems: Utility inter-tied PV, this is the most common.
Stand a lone system that is off the electrical grid & uses batteries to store electrical energy for hours of darkness. & Utility inter-tied with battery backup.

- Cost for a Photovoltaic system in Wisconsin about $10/watt.
- Average system sizing is 1,000 Kwhs/month
- Solar windows, such as in office buildings.
- Solar hot water systems, and hot water space heating systems.
- Payback time is around 13 years for a 2 panel system.

Wind Power: A wind power map exist for Wisconsin on the internet. Tower height is very important to output specifications.
Workshops & events: www.the-MREA.org, www.milwaukeeshines.com, www.focuson energy.com.

Club business meeting called to order by President at 8:23 pm.

- Membership meeting minutes accepted as published in the chatter by a voice vote w/o dissent.
- No active treasurer, so no report for this month's meeting.
- November 18th will be the next membership meeting.
- The Xmas party will be December 5th at Meyer's restaurant. Food will consist of Chicken and a Second Entry.
- No raffle will be held at the November meeting.
- Gordon West will make a presentation at the clubs March 31st membership meeting just before AES SuperFest.
- Gerry, Had the suggestion to have a presentation talk about new radio features at the January meeting. Suggestions for meeting topics can be posted to the club's Yahoo Group.
- WX service Tech. class did not take place.
- Our Club is considering offering a General level operator's license class sometime in the spring of 2011.
- Bob, W9FRD & John, KB9SXH will staff the club table at the MRC91 swapfest on November 6th.
- Club needs committees to be formed to work on club tasks, such as Field day, the club net, etc…
- The MRAC 's 95th anniversary is coming up in 2012.
- Cooperative agreement being formed with MAARS group. MAARS, MRAC joint breakfasts will begin on November 13th. Next one will be December 11th at the Old Country Buffet in Greenfield. (North of Southridge).
- On December 1st, between 2-3pm W9QF will broadcast on 10 & 40 meters with their 30mw station. Reception reports can be relayed over the 145.390 club repeater.
- General class question pool will be changing in 2011.
- Special meeting being called for January 2011 for a vote on the new by-law revisions being drafted by the Board of Directors. Ted Stiller, WA9RDI brought up questions regarding the new by-law changes. Questions regarding club officer positions answered by Dave DeFebo, WB9BWP.
- In the last decade the MRAC club has had 30 SK's reported.
- Notice given that the election meeting is being moved to April.

Motion made to adjourn meeting at 9:30 pm by Rick Kissell, WB9GYT. Seconded by Al, KC9IJJ. Meeting adjourned at 9:30 pm.

Meeting area returned to presentable condition at close of activities.

Respectfully submitted,
Michael, KC9CMT

From The ARRL E-Letter for November:

The Doctor Is IN: Pacemakers and RF

Schley Cox, W4AMW, of Owensboro, Kentucky, told the Doctor that he's headed to see the cardiologist next week about a pacemaker. He's already started researching their use around RF and says he is happy to go all low power (QRP), if that's what's called for. Schley mentioned that he might also be able to operate his rig remotely -- perhaps 20 feet away, but he needs to know how to measure stray RF in the shack itself.

Here's what the Doctor had to say:

I haven't received actual reports of any pacemaker problems and that seems to go along with the info on the ARRL Web site. Note that there are no power levels (or field strength) limits noted there, nor have I found any on manufacturers' Web sites. Thus knowing the actual field strength level in the station may not help. If it were me, I would start by talking to my physician. She won't be able to give you power limits, but perhaps could indicate symptoms to watch for while on the air so you could take appropriate action quickly if called for.

I would start with a careful RF safety evaluation, as required by the FCC anyway. While the FCC guidelines were not based on pacemaker interference, they should result in a reasonably safe environment. If your station is properly set up -- without common mode feed line current, for example -- most radiation should surround the antenna and there should not be much RF within the shack.

Calibrated RF field strength meters are available, but are quite expensive. Relative measurement is pretty easy -- look at any recent *ARRL Handbook*. If you had a simple field strength meter running at all times in the station (I'm thinking the diode and microampmeter type that doesn't require power), you could see if anything changed, and diagnose and repair as needed.

Thanks Doctor! Do you have a question or a problem? Send your questions via e-mail or to "The Doctor," ARRL, 225 Main St, Newington, CT 06111 (no phone calls, please). Look for "The Doctor Is IN" every month in QST, the official journal of the ARRL.

Next Regular Meeting

The next meeting will be November 18th at 7:00 PM. We meet in the Fellowship Hall of Redemption Lutheran Church, 4057 N Mayfair Road. Use the south entrance.

Please do not call the church for information!

Club Nets

Please check in to our nets on Friday evenings.

Our ten meter SSB net is at **8:30 p.m.** at **28.490 MHz USB.**

Our two meter FM net follows at 9:00 p.m. on our repeater at **145.390 MHz** with a minus offset and a **PL of 127.3 Hz.**

You don't have to be a member of the club to join us!

Visit our website at: **www.w9rh.org**

Or phone (414) 332-MRAC or 332 - 6722

Chatter Deadline

The **DEADLINE** for items to be published in the **Chatter** is the 15th of each month. If you have anything (announcements, stories, articles, photos, projects) for the Chatter, please get it to me before then.

You may contact me or Submit articles and materials by e-mail at: **Kc9cmt@earthlink.net**

or by Post at:

Michael B. Harris

807 Nicholson RD

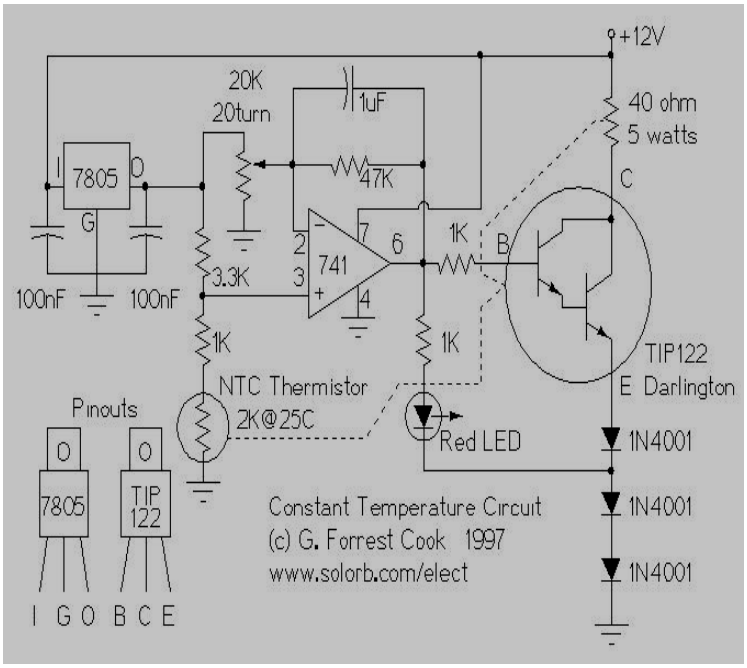
South Milwaukee, WI 53172-1447

Club Repeater, 145.390Mhz Minus Offset (127.3 PL)

Experimenter's Bench

Constant Temperature Circuit

(C) G. Forrest Cook 1997



Introduction

Description: This circuit is a generic low power temperature controller that can be used for stabilizing temperature sensitive electronic circuits. It was built to stabilize a radio frequency VFO (Variable Frequency Oscillator) for ham radio applications. The circuit has also been used to lower the drift of a Ramsey FM10a micropower FM transmitter.

Theory

The 7805 voltage regulator provides a reference voltage that is fed into a resistive bridge formed on one side by the 20K trimmer and the other side by the 3.3K resistor and the 1K/ thermistor combination. The thermistor is an NTC (Negative Temperature Coefficient) type. The op-amp is run in a differential mode and tries to keep its inputs at the same potential by the thermal feedback loop formed by the heater and the thermistor.

The three 1N4001 diodes are used to bias the emitter of the transistor up enough that it can shut off fully with the limited voltage swing from the 741 op-amp. The heating indicator LED (a standard red LED) also taps off of the same diode ladder to enable it to shut off entirely.

The value of the (1uF) capacitor in the op-amp feedback loop may need to be adjusted if the circuit "rings", or swings back and forth before stabilizing on a temperature. The capacitor value is specific to the thermal mass that is being temperature stabilized.

The heater resistor is rated at approximately 40 ohms and 5 watts. The value of the resistor determines the heating rate and the power consumption. The resistor value should not be too low or the resulting high current will damage the 1N4001 diodes and/or the TIP122 transistor.

Construction

I recommend building this circuit on perforated circuit board or make a PC board if you have the tools. I epoxied the thermistor and all of the heat generating components (the 40 ohm resistor, the TIP122, and the 3 1N4001 diodes) on an L shaped aluminum piece, the rest of the components were mounted on a perforated circuit board. The circuit board was then mounted on the aluminum piece with standoffs.

The mounting tab of the TIP122 is electrically hot, it should be isolated from the heat sink with an insulating washer, or the entire heat sink should be isolated from ground. Use heat conducting grease when mounting the transistor on the heat sink. Also be sure that the thermistor has a good thermal contact with the 40 ohm resistor. The 78L05 regulator's mounting tab does not require a heat sink, it should not be electrically isolated from the TIP122 tab.

The 40 ohm resistor and TIP122 heat sink should be mounted near the item that is to be temperature controlled. I recommend using forming a box of Styrofoam insulation around the temperature regulator and the temperature controlled device. The insulated box will reduce power consumption, speed up the initial warm up period, and stabilize the temperature from external changes.

Alignment

Adjust the 20K pot to center and power up the circuit. The LED should start out bright, then gradually dim down as the circuit reaches equilibrium. Put a thermometer on the 40 ohm resistor and measure the temperature. Adjust the 20K pot until the resistor reaches the temperature that you desire. If the circuit is properly built, it should not oscillate. The voltage on the 741 op-amp output (pin 6) can be monitored with a volt meter to observe the circuit's operation.

Specifications

Operating Voltage: 10-15 Volts DC
Operating Current: 250mA at 12 Volts DC input initial current

Use

Apply power to the circuit, let all of the components warm up. The heating resistor will stabilize at a constant temperature.

NEW DUES POLICY

New members paying dues on or after our September meeting will be considered paid in full for the following year.

A Look Back

By Barry Weathersby

In early 1967 N0EFJ was the MARS station for the Third Marine Division Headquarters (Forward) base camp in Phu Bai, Republic of Vietnam. It was about 60 miles north of DaNang, the main division HQ. I had been a MARS operator for four or five months and we had improved the station from a 'van' in which three operators worked and lived, to a real building with a waiting room for troops trying to call home, an operations room with our radio equipment, and sleeping quarters. The entire building was about the size of an average two car garage but we were proud of it. It had been built and furnished by our own sweat and.... trading phone patches for what we needed. Bill Biggs, my mentor (and best friend) was the best scrounger and trader I have ever known. Somehow he acquired the stuff we needed to do our job. I'll never completely understand where he found most of it, but if we had to have it to run phone patches, he traded for it.

He came home with a 100 watt, AM broadcast band transmitter the size of a small refrigerator. He said someone was going to get us a new telephone pole for our inverted 'V' for the in country net, but we had to provide an AM radio station for the Phu Bai area. So we strung up the longest dipole I had ever seen and started asking for tapes of music from friends back in the world. I played 60's rock and roll and Bill was a jazz nut, so we played that. We took requests but you had to provide the music if we didn't have it. We never said "Good Morning, Vietnam" but instead identified ourselves as 'N0EFJ, the tower of power in the north of the south, the Voice of Vietnam'.

One afternoon I saw a Marine staring at our new log periodic antenna. He had obviously been in the bush a while, and even more obviously recognized the LPA for what it was. When he saw the call letters on the sign, I knew I had a new operator. I recruited Jim Kuhl immediately. He was in Third Force Recon and was reluctant to leave such a tight unit, but the lure of the Collins equipment in the station won. I didn't know it then, but I had recruited my replacement at 'Juliet'.
Gunnery Sergeant Harry Boggs, WA4RPE, showed up at N0EFJuliet one day with news. Third Mar Div was moving north. The main headquarters was moving from DaNang to Phu Bai, and 3rd Mar Div Fwd was going north to Dong Ha. Phu Bai was civilized by then and we knew the real action was up north, meaning that's where the grunts who needed the phone patches the most were. He and Bill flew north to scout out a location for a new station. The original NAVMARS station in Vietnam was N0EFA. Alpha had been in DaNang since day one, but it was being closed (actually changed to N0EFDelta) as the new division HQ station would be Juliet in Phu Bai. The new N0EFA would open in Dong Ha, just a few miles south of the DMZ. What a plan!

Bill told me he and Harry wanted me to go north with them but it was my choice. Like there was a choice! I had already packed my stuff and didn't even bother to get orders. I just jumped on the first C-130 going north. Jim Kuhl replaced me and another ham was brought in to help run Juliet.

Dong Ha was scary. Nobody had mentioned to me (and obviously to the generals who made these decisions) that we were within easy range of the big 152 mm artillery and 144 mm rockets in North Vietnam. I figured I was good enough to handle it... until about 0200 my first morning there. My first job upon arrival had been to dig a 'fighting hole' near the back door of the station and I was glad I had completed it when the first rockets came slamming in. Nobody had ever told me this job was going to be easy, but nobody had ever told me ham radio would be like this, either. The North Vietnamese Army never sent us a thank you card for allowing them to use our tower with it's log periodic as an aiming stake, but we know they appreciated our efforts.

But we ran phone patches like there was no tomorrow. When the band opened to 'patch quality', we would get our own Pacific Bell operator (my favorite was Delrae) in the local phone company for our gateway station, and she could take five to ten phone numbers at a time and stack the collect calls back to back with no time lost between calls. When it was busy we limited the calls to three minutes and let them run longer when it wasn't so busy, and could average fifteen to twenty calls an hour. On a night with really good propagation we had been known to run seventy five phone patches, but fifty was a great night.

At Alpha I also recruited Jim Elshoff, another Force Recon Marine and ham. To this day we remain close friends.

Jim Elshoff stands guard over the new Alpha, and more importantly, over the new sign.

Photos by Tony Mastriani

Testing & Local Swapfests

VE Testing

Next VE Testing on November, 27th 10:30 am-12:30 am at:

Amateur Electronic Supply 5720 W. Good Hope Rd. Milwaukee, WI 53223.

Next Area Swapfest:

January 8th, 2011

West Allis Radio Amateur Club's

39th Annual Midwinter Swapfest

Waukesha Fair Grounds, Waukesha, WI

West Allis Radio Amateur Club
Website: http://www.warac.org

Working Committees

Field Day

- Open

FM Simplex Contest

- Joe – N9UX
- Jeff-K9VS
- Dave-WA9WXN
- Brian-K9LCQ
- Sherm-KB9Q
- Mark-AB9CD

Ticket drum and drawing

- Tom – N9UFJ
- Jackie – No Call

Newsletter Editor

- Michael-KC9CMT

Webmaster

- Joe Schwartz—N9UX

Refreshments

- Michael – KC9CMT

Membership Information

The Hamateur Chatter is the newsletter of MRAC (Milwaukee Radio Amateurs' Club), a not for profit organization for the advancement of amateur radio and the maintenance of fraternalism and a high standard of conduct. MRAC Membership dues are $17.00 per year and run on a calendar year starting January 1st. MRAC general membership meetings are normally held at 7:00PM the last Thursday of the month except for November when Thanksgiving falls on the last Thursday when the meeting moves forward 1 week to the 3rd Thursday and December, when the Christmas dinner takes the place of a regular meeting. Club Contact Information Our website address **http://www.w9rh.org**

Telephone (414) 332-MRAC (6722)

Address correspondence to:

MRAC, PO Box 070695,

Milwaukee, WI 53207-0695.

Email may be sent to: **w9rh@arrl.net**

Our YAHOO newsgroup:

http://groups.yahoo.com/group/MRAC-W9RH/

CLUB NETS:

• Our Ten Meter SSB net is Friday at 8:00PM on 28.490 MHz ± 5 KHz USB.

• Our Two Meter FM net follows the Ten meter net at 9:00PM on our repeater at 145.390MHz - offset (PL 127.3)

Milwaukee Area Nets

Mon.8:00 PM 3.994 Tech Net

Mon.8:00 PM 146.865- ARES Walworth ARRL News Line

Mon.8:00 PM 146.445 Emergency Net

Mon.8:00 PM 146.865- ARES Net Walworth

Mon.8:45 PM 147.165- ARRL Audio News

Mon. 9:15 PM 444.125+ Waukesha ARES Net

Mon.9:00 PM 147.165- Milwaukee County ARES Net

Tue.9:00 AM 50.160 6 Mtr 2nd Shifter's Net

Tue. 7:00 PM 145.130 MAARS Trivia Net

Tue. 8:00 PM 7.035 A.F.A.R. (CW)

Wed. 8:00 PM 145.130 MAARS Amateur Radio Newsline

Wed. 9:00 PM 145.130 MAARS IRLP SwapNet w/FM-38 Repeaters (IRLP 9624)

Thur. 8:00 PM 50.160, 6 Mtr SSB Net

Thur. 9:00 PM 146.910 Computer Net

Fri. 8:30 PM 28.490 MRAC W9RH 10 Mtr Net SSB

Fri. 9:00 PM 145.390 W9RH 2 Mtr. FM Net

Sat. 9:00 PM 146.910 Saturday Night Fun Net

Sun 8:30 AM 3.985 QCWA (Chapter. 55) SSB Net

Sun 9:00 AM 145.565 X-Country Simplex Group

Sun 8:00 PM 146.91 Information Net

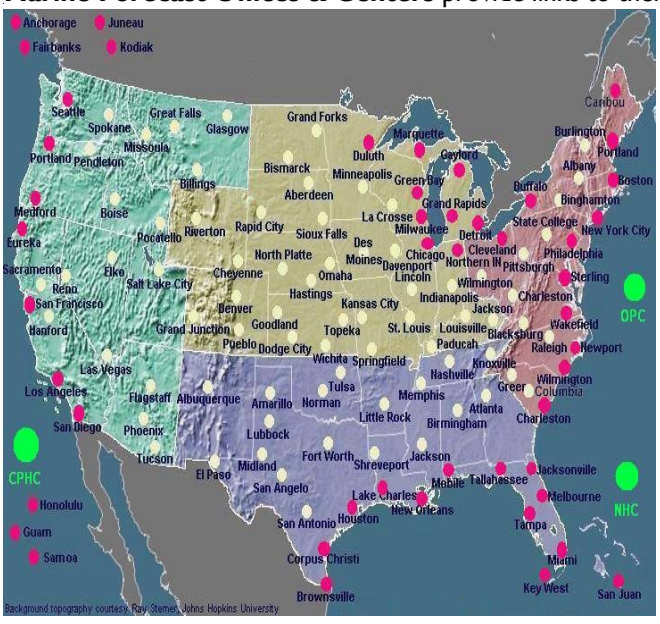
Sun 8:00 PM 28.365 10/10 International Net (SSB)

Sun 9:00 PM 146.91 Swap Net

2 meter repeaters are offset by 600KHz - - 70 centimeter repeaters are offset by 5 MHz

SSB frequencies below 20 meters are LSB and for 20 Mtr and above are USB.

Marine Forecast Offices & Centers provide links to their products as well as additional regionally focused information. Click on map for links.



[Beware of hypothermia during these cooler months. Did you know your body can cool 25 times faster in water than in air? That water does not need to be very cold to endanger you?]

[What is a "Marine Zone Forecast"?]
[What is a "Marine Point Forecast"?]

[How can I get a marine forecast via zip, city, or lat/lon?]

[Did you know that the height of some individual waves may be twice the height of the forecast seas? And may present an even greater danger near shore?]

MRAC - MAARS

HOLIDAY PARTY & DINNER

Meyer's Restaurant & Bar

4260 S. 76Th. Street

Greenfield, Wisconsin 53220

Sunday, December 5, 2010

Social Hour 4-5 pm ~ Dinner Serving at 5 pm

Tickets are $18 and all are welcome

Reservations must be made in advance and are due by

November 28th.

PLEASE JOIN US

(Cut and enclose with payment)

To make your reservations make your check payable to: MRAC

And mail to

Al Maahs (KC9IJJ)

446 South 74Th. Street

Milwaukee, WI 53214

Please list names of Guests that will be attending

_____

_____

_____

Number of Guests ____ X $18.00 = _____ amount enclosed

Need more information ? email at KC9IJJ@arrl.net